Part II

The Main Locations for the Flood/Post-Flood Boundary

This part will describe the four major locations for the Flood/post-Flood boundary believed by significant numbers of creation scientists, assuming the geological column for the sake of discussion. It will give my testimony of why I first leaned toward the K/T location and have switched to the late Cenozoic position. I will also provide a case that the development of a sophisticated Flood model, as well as the location of the Flood/post-Flood boundary, must be based on the Bible and not secular ideas.

Chapter 3

The Dispute over the Boundary

Flood geologists have provided many answers to challenges on the Genesis Flood. However, when it comes to the Flood/post-Flood boundary, there is abundant controversy. I think it can be mostly like the proverbial six blind men feeling the elephant. Each feels only part and forms their conclusion. Earth science is a vast field with many subfields and many unknowns. No one is able to pull it all together; there is too much information. We just do not have infinite intelligence. The location of the Flood/post-Flood boundary and the extent of post-Flood catastrophism is one of those issues where creationists of good will have drawn different conclusions.

The Role of the Geological Column

A creationist usually relates the location of the Flood/post-Flood boundary to their position on the geological column (see Figure 3.5). This approach is controversial within Flood geology.[1] Some creationists believe that we should take the geological column as an absolute sequence of biblical earth history,[2] while others think we should throw it out altogether.[3] The latter group believes there are local to regional rock sequences or geological columns, but no worldwide rock sequence or geological column. I take the middle road; I think the geological column is a good general sequence of the fossil order but has many exceptions.[4,5,6]

The validity of the geological column within biblical earth history is beyond the scope of this book. But for sake of argument, I will *assume* it is a record of biblical earth history largely because most post-Flood catastrophists accept it as absolute or near absolute. Because of the role it plays in the dispute over the amount of post-Flood catastrophism, a brief overview of the geological column is provided in the in-depth section at the end of the chapter.

Four Main Locations for the Flood/post-Flood Boundary

Creationists have four main ideas about the location of the Flood/post-Flood boundary (Figure 3.5). Going upward in the geological column, they are placed: 1) in the

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[1] Reed, J.K. and M.J. Oard (editors), 2006. *The Geological Column: Perspectives within Diluvial Geology*. Creation Research Society Books, Chino Valley, AZ.

[2] Tyler, D.J. and Coffin, H.G., 2006. Accept the column, reject the chronology; in: Reed, J.K. and Oard, M.J. (Eds.), *The Geologic Column: Perspectives within Diluvial Geology*, Creation Research Society Books, Chino Valley, AZ, pp. 53–71.

[3] Reed, J.K., Klevberg, P., and Froede Jr., C.R., 2006. Toward a diluvial Stratigraphy; in: Reed, J.K. and Oard, M.J. (Eds.), *The Geologic Column: Perspectives within Diluvial Geology*, Creation Research Society Books, Chino Valley, AZ, pp.31–51.

[4] Oard, M.J., 2006. The geological column is a general order with many exceptions; in: Reed, J.K. and Oard, M.J. (Eds.), *The Geologic Column: Perspectives within Diluvial Geology*, Creation Research Society Books, Chino Valley, AZ, pp. 99–121.

[5] Oard, M.J., 2010. Is the geological column a global sequence? *Journal of Creation* 24(1):56–64.

[6] Oard, M.J., 2010. The geological column is a general Flood order with many exceptions. *Journal of Creation* 24(2):78–82.

Precambrian, 2) at the late Paleozoic, 3) near the Cretaceous/Tertiary (K/T), and 4) in the late Cenozoic. There are other locations proposed, but few advocate those positions, so they will not be discussed further. At one time there were three main locations but some who put the boundary in the late Paleozoic have chosen instead to place it in the late Precambrian.[7,8]

The arguments presented in this book favor the late Cenozoic option and will mainly be contrasted with the K/T Boundary Model. These arguments also apply to proposed boundary locations lower down in the geological column. If the Cenozoic can be shown to be a product of the Flood, so then would the Mesozoic, Paleozoic, and Precambrian sedimentary rocks. (There is another dispute among Flood geologists on the location of the pre-Flood/Flood boundary with some Flood geologists advocating that the Precambrian sedimentary rocks are pre-Flood rocks. Like the issue of the geological column, this dispute is also beyond the scope of this book.)

Those who believe the boundary is in the late Cenozoic generally place it at the Pliocene/Pleistocene, but this is not a hard and fast location. In some cases the boundary may be in the Pliocene while in areas not associated with the Ice Age, in the mid Pleistocene, defined as from 781 to 126 thousand years ago, before the 'last' ice age within the uniformitarian multiple ice age model.[9] The latter location was favored by the late Roy Holt.[10] The Pleistocene is generally supposed to be the time of the Ice Age, but in places there are thick layers of early and mid-Pleistocene strata that no connection to the Ice Age. It would be difficult to deposit them during the post-Flood period.

The Precambrian Boundary Model

The location of the boundary within the Precambrian is a new development. Advocates of this new boundary generally put it in the late Paleozoic (see below) because they saw difficulties for the Flood producing the early Paleozoic strata. They have since pushed the boundary to somewhere within the Precambrian or near the Precambrian/Cambrian contact. One of the best developed Flood models based on this location is David Tyler's *Recolonization Model*.[11] Another well-developed, but unpublished, model that advocates the general location of the boundary at or near the Precambrian/Cambrian boundary is the Collapse Tectonics Model developed by Phil Budd.[12] Details of Budd's model can be found in the *Flood Science Review* at the *In Jesus Name Productions* web site.[13] Steven Robinson, who once advocated the late

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[7] Garner, P. and Peet, J., 1999. Reviews of *From Flood to Pharaoh–A Chronological Framework* by Steven J. Robinson and of *From Flood to Pharaoh–Understanding the Old Stone Age* by Steven J. Robinson, *Origins—The Journal of the Biblical Creation Society* **26**:27–30.

[8] Tyler, D.J., 2006. Recolonization and the mabbul; in: Reed, J.K. and Oard, M.J. (Eds.), *The Geological Column: Perspectives within Diluvial Geology*, Creation Research Society Books, Chino Valley, AZ, pp. 73–88.

[9] Pillans, B. and Gibbard, P., 2012. The Quaternary Period; in: Gradstein, F.M., Ogg, J.G., Schmitz, M.D., and Ogg, G.M. (editors), *The Geologic Time Scale*, Elsevier, New York, NY, pp. 979–1,010.

[10] Holt, R.D., 1996. Evidence for a late Cainozoic Flood/post-Flood boundary, *J. Creation* **10**(2):128–167.

[11] Tyler, D.J., 2006. Recolonization and the mabbul; in: Reed, J.K. and Oard, M.J. (Eds.), *The Geological Column: Perspectives within Diluvial Geology*, Creation Research Society Books, Chino Valley, AZ, pp. 73–88.

[12] Budd, P.G., 2009. *Forbidden Geology*, eight manuscript. Self published.

[13] www.IJNP.org.

Paleozoic position, is now convinced the Flood/post-Flood boundary is in the Precambrian,[14] if he still believes in the Flood at all!

The Late Paleozoic Boundary Model

A few creationists place the Flood/post-Flood boundary in the Paleozoic, especially the late Paleozoic.[15,16,17,18,19,20,21,22,23,24,25] There is a fair amount of variability in not only the location of the boundary but also on the details of the particular Flood model advocated. The reasons for such a radical shift in the boundary downward from the traditional late Cenozoic boundary was presented in a special issue of the *Journal of Creation* in 1996, volume 10(1). The reason advocates wanted the boundary low in the geological column was based on the belief that the Flood could not produce certain features in the rocks and fossils. Common examples of challenges to the one-year global Flood are: (1) dinosaur tracks, eggs, nests, and scavenged bonebeds and (2) the evidence of ancient ice ages from around 2 billion years to 300 million years within the evolutionary timescale. I addressed these issues in *Dinosaur Challenges and Mysteries*[26] and *Ancient Ice Ages or Gigantic Submarine Landslides?*[27] respectively.

The K/T Boundary Model

The third school of thought believes the Flood/post-Flood boundary is near the Cretaceous/Tertiary (K/T) boundary of the geological column.[28,29,30,31,32] The bottom of

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[14] Robinson, S.J., 2000. The then world with water having been deluged perished, *Origins: The Journal of the Biblical Creation Society* 29:15–24.

[15] Northrup, B.E., 1990. Identifying the Noahic Flood in historical geology: part two; in: Walsh, R.E. and Brooks, C.L. (Eds.), *Proceedings of the Second International Conference on Creationism*, volume I General Sessions. Creation Science Fellowship, Pittsburgh, PA, pp. 181–188.

[16] Garner, P., 1996. Where is the Flood/post-Flood boundary? Implications of dinosaur nests in the Mesozoic. *Journal of Creation* 10(1):101–106.

[17] Garner, P., 1996. Continental flood basalts indicate a pre-Mesozoic Flood/post–Flood boundary. *Journal of Creation* 10(1):114–127.

[18] Garton, M., 1996. The pattern of fossil tracks in the geological record. *Journal of Creation* 10(1):82–100.

[19] Robinson, S.J., 1995. From the Flood to the Exodus: Egypt's earliest settlers. *Journal of Creation* 9(1):45–68.

[20] Robinson, S.J., 1996. Can Flood geology explain the fossil record? *Journal of Creation* 10(1):32–69.

[21] Tyler, D.J., 1994. Tectonic controls on sedimentation in rocks from the Jurassic Series (Yorkshire, England); in: Walsh, R. E. (editor), *Proceedings of the Third International Conference on Creationism*, Creation Science Fellowship, Pittsburgh, PA, pp. 535–545.

[22] Tyler, D. J., 1996. A post-Flood solution to the chalk problem. *Journal of Creation* 10(1):107–113.

[23] Scheven, J., 1990. The Flood/post-Flood boundary in the fossil record; in:, Walsh, R.E. and Brooks C.L. (Eds.), *Proceedings of the Second International Conference on Creationism*, volume II, Creation Science Fellowship, Pittsburgh, PA, pp. 247–256.

[24] Scheven, J., 1996. The Carboniferous floating forest—an extinct pre-Flood ecosystem. *Journal of Creation* 10(1):70–81.

[25] Setterfield, B. and H. Setterfield, 2009. *The Bible and Geology*, third edition. Genesis Science Research, Medford, OR.

[26] Oard, M.J., 2011.*Dinosaur Challenges and Mysteries: How the Genesis Flood Makes Sense of Dinosaur Evidence Including Tracks, Nests, Eggs, and Scavenged Bones*, Creation Book Publishers, Atlanta, GA.

[27] Oard, M.J., 1997. *Ancient Ice Ages Or Gigantic Submarine Landslides?*Creation Research Society Books, Chino Valley, AZ.

[28] Austin, S.A., 1994. A creationist view of Grand Canyon strata; in: Austin, S.A. (Ed.), *Grand Canyon—Monument to Catastrophism*, Institute for Creation Research, Dallas, TX, pp. 57–82.

the Tertiary corresponds to the bottom of the Cenozoic (see in-depth section on the geological column below). Some creationists believe the boundary is a little higher up in the geological column, namely in the early Cenozoic.[33] So, the K/T boundary is not a rock solid location within this school of thought, but for purposes of analysis and discussion I will refer to their positions as the *K/T Boundary Model*. So, in this model, most, if not all, the Cenozoic sedimentary rocks would be post-Flood.

Since all or most of the Cenozoic is post-Flood, the K/T boundary has to explain the activity of the Cenozoic era by post-Flood events. The Cenozoic implies huge earth catastrophes, as will be documented in this e-book. As a result, the K/T boundary model has spawned other creationist hypotheses, like the dam-breach hypothesis for the origin of the Grand Canyon,[34] because Grand Canyon (Figure 3.1) formed in the late Cenozoic according to the uniformitarian geological column. The special case of the origin of Grand Canyon and an analysis of the dam-breach hypothesis will be discussed in Chapter 38.

The Green River Formation in the basins of the central Rocky Mountains (Figure 3.2) is dated as Eocene and therefore located in the early Cenozoic. So, the Green River Formation is considered the deposits from a post-Flood lake.[35,36,37,38,39] But is the Green River Formation post-Flood? This is a subject that I have researched and pondered.[40,41,42] My thoughts will be summarized in Chapter 36.

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[29] Austin, S.A., Baumgardner, J.R., Humphreys, D.R., Snelling, A.A., Vardiman, L., and Wise, K.P., 1994. Catastrophic plate tectonics: a global flood model of earth history; in: Walsh R.E. (Ed.), *Proceedings of the Third International Conference on Creationism, Technical Symposium Sessions*, Creation Science Fellowship, Pittsburgh, PA, pp. 609–621.

[30] Brand, L., 2007. Wholistic geology: geology before, during, and after the Biblical Flood, *Origins* 61:7–34.

[31] Wise, K.P., 2002. *Faith, Form, and Time: What the Bible Teaches and Science Confirms about Creation and the Age of the Universe*, Broadman & Holman Publishers, Nashville, TN.

[32] Wise, K.P and Richardson, S.A., 2004. *Something from Nothing—Understanding What You Believe about Creation and Why*, Broadman & Holman Publishers, Nashville, TN.

[33] Snelling, A.A., 2009. *Earth's Catastrophic Past: Geology, Creation & the Flood*, volume 1 and 2, Institute for Creation Research, Dallas, TX.

[34] Austin, S.A., 1994. How was Grand Canyon eroded? In: Austin, S.A. (Ed.), *Grand Canyon—Monument to Catastrophism*, Institute for Creation Research, Dallas, TX, pp. 83–110.

[35] Whitmore, J.H., 2006. The Green River Formation: a large post-Flood lake system, *Journal of Creation* 20(1):55–63.

[36] Whitmore, J.H., 2006. The geologic setting of the Green River Formation, *Journal of Creation* 20(1):72–78.

[37] Whitmore, J.H., 2006. Difficulties with a Flood model for the Green River Formation, *Journal of Creation* 20(1):81–85.

[38] Whitmore, J.H. and Wise, K.P., 2008. Rapid and early post-Flood mammalian diversification evidences in the Green River Formation; in: Snelling, A.A. (Ed.), *Proceedings of the Sixth International Conference on Creationism*, Creation Science Fellowship and Institute for Creation Research, Pittsburgh, PA, and Dallas, TX, pp. 449–457.

[39] Brand, L., 2007. Wholistic geology: geology before, during, and after the Biblical Flood, *Origins* 61:7–34.

[40] Oard M.J., 2006. The case for Flood deposition of the Green River Formation, *Journal of Creation* 20(1):50–54.

[41] Oard, M.J., 2006. Response to the post-Flood lake model for the Green River Formation, *Journal of Creation* 20(1):64–71.

[42] Oard, M.J., 2006. Geomorphology indicates the GRF was deposited in the Flood, *Journal of Creation* 20(1):79–80.

Figure 3.1. Grand Canyon (view north from Yavapai Observation Station).

The Late Cenozoic Boundary Model

The fourth school of thought places the Flood/post-Flood boundary at the end of the Cenozoic.[10,43,44,45,46,47,4849,50,51] The late Cenozoic is a general time that would include the Miocene, Pliocene, and Quaternary (see Figure 3.5). The Quaternary is the last period of geological time and is the general time of the Ice Age, which is now the last 2.6 million years of secular earth history. The Tertiary starts at 65 million years and ends at 2.6 million years. Both the Tertiary and the Quaternary are considered the Cenozoic. The

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[43] Coffin, H.G. with Brown, R.H., 1983. *Origin by Design*, Review and Herald Publishing Association, Washington, D.C.

[44] Morris, H.M., 1996. The geological column and the Flood of Genesis, *Creation Research Society Quarterly* 33:49-57.

[45] Oard, M.J., 1996. Where is the Flood/post-Flood boundary in the rock record? *Journal of Creation* 10(2):258–278.

[46] Oard, M.J., 1999. Letter-to-the editor, *Origins—The Journal of the Biblical Creation Society* 26:22–24.

[47] Oard, M.J., 2007. Defining the Flood/post-Flood boundary in sedimentary rocks, *Journal of Creation* 21(1): 98–110.

[48] Oard, M.J. and Klevberg, P., 2005. Deposits remaining from the Genesis Flood: Rim Gravels in Arizona, *Creation Research Society Quarterly* 42(1):1–17.

[49] Roth, A.A., 1998. *Origins—Linking Science and Scripture*, Review and Herald Publishing, Hagerstown, MD, p. 209.

[50] Whitcomb, Jr., J.C. and Morris, H.M., 1961. *The Genesis Flood*, Baker Book House, Grand Rapids, MI.

[51] Woodmorappe, J., 1996. Studies in Flood geology: clarifications related to the 'reality' of the geological column, *Journal of Creation* 10(2):279–290.

Tertiary and Cenozoic begin at the same time, explaining why the K/T boundary model has "Tertiary" in its name. But since the Tertiary ends at 2.6 million years ago, and the boundary in the late Cenozoic model can be in the Quaternary (or Pleistocene) at some locations, this model is called the "Late Cenozoic boundary Model."

The late Cenozoic is the *traditional* boundary since it was first advocated by Whitcomb and Morris[50] and later reinforced by the late Henry Morris.[44] The reasons for deviating from the traditional location of the boundary are many and worth considering and analyzing. In practice, the late Cenozoic school of thought believes nearly all of the lithified sedimentary rocks are from the Flood, and the boundary is near, or at, the surface of the hard rocks.

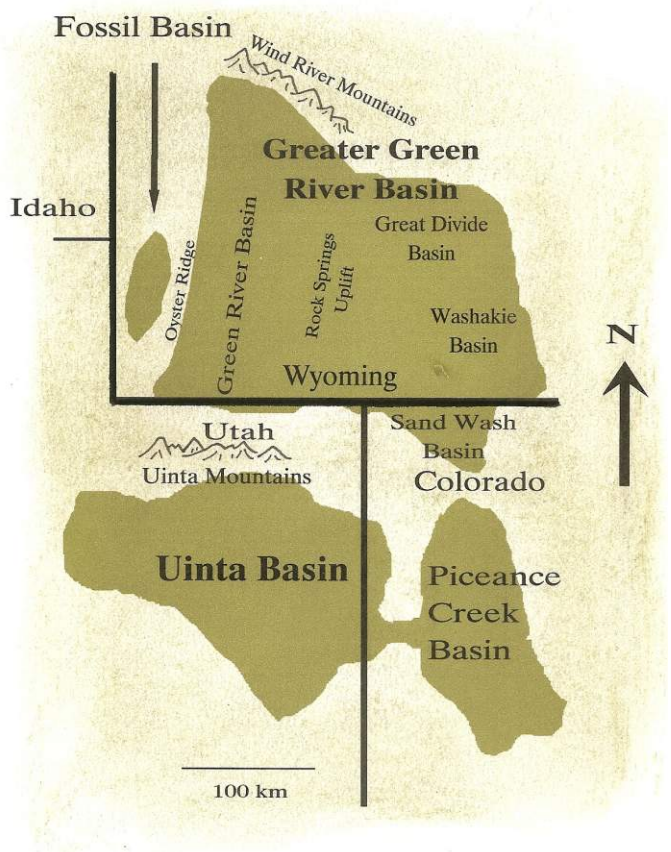

Figure 3.2. Locations of the Green River Formation in Colorado, Wyoming, and Utah (drawn by Mrs. Melanie Richard).

The Dispute

The above schools of thought represent a considerable divergence of opinion, and as a result, have added a lot of confusion to Flood geology, causing contradictory concepts of the Flood to develop. All four schools of thought have used informal criteria for determining the boundary. I have attempted to develop more formal criteria,[47] and it is one of the purposes of this book to refine these criteria and add more.

The position of the Flood/post-Flood boundary is not locked in concrete in the minds of advocates. In the past 15 years or so, Paul Garner has shifted from the Late Paleozoic

to the K/T Boundary Model.[52] On the other hand Steven Robinson has shifted the boundary downward from the late Paleozoic into the Precambrian.[14]

Figure 3.3. Area of the Columbia River Basalts (CRBs), including the Steens Volcanics of southeast Oregon that are now correlated to the CRBs (drawn by Mrs. Melanie Richard).

How I Came to Believe the Boundary Is in the Late Cenozoic

Initially I leaned toward the belief the Flood/post-Flood boundary is at the K/T. But as a result of years of study of this subject, I have come to advocate the fourth school of thought, and in particular a very late Cenozoic boundary at *most* locations.

When I was a new creationist, I was influenced by the idea of copious post-Flood catastrophism in the Cenozoic. I believed that the Columbia River Basalts (CRBs) from my home state of Washington (Figure 3.3 and 3.4), dated as Miocene 6 to 17 million years within the uniformitarian geological timescale, were post-Flood and would have contributed to the dust and aerosols in the stratosphere needed to sustain cooler summer temperatures during the Ice Age. I stated:

> Another likely source of volcanic dust and aerosols is basaltic lava flows, such as those found on the Columbian Plateau in the northwest United States. These

[52] Garner, P., 2009. *The New Creationism: Building Scientific Theories on a Biblical Foundation*, Evangelical Press, Darlington, England.

> flows are now believed to have introduced significant amounts of aerosols into the upper atmosphere, partly by local explosive volcanism…[53]

The idea that the CRBs were post-Flood[54] seemed reasonable at the time. This is when I knew very little about geology. After examining the geology of the Pacific Northwest, I became convinced the CRBs were deposited within the Flood.[45] This was an important turning point. I will step you through my research of the CRBs in Chapter 37.

Figure 3.4. The Columbia River Basalt flows showing the colonnade and entablature at Banks Lake, upper Grand Coulee.

My friend, Roy Holt, who is now with the Lord, had a similar experience in that he was convinced the Flood/post-Flood boundary was lower down in the geological column—until he looked more closely at the geological evidence:

> Several years ago I realized that placement of the Flood/post-Flood boundary was crucial to understanding Earth's geological history, so I set out to find evidence for its proper placement. When beginning this research, I was slightly biased toward placing the Flood/post-Flood boundary near the Cretaceous/Tertiary boundary. This bias came from private discussions with creation researchers and reading creation research suggesting this location. It was

[53] Oard, M.J., 1990. *An ice Age Caused by the Genesis Flood*, Institute for Creation Research, Dallas, TX, p. 69.

[54] Nevins, S.E., 1974. Post-flood strata of the John Day Country, northeastern Oregon, *Creation Research Society Quarterly* 10:191–204.

> only after collecting most of the data presented herein that I became convinced that the boundary was much later in the geological record.[55]

At one time I also leaned toward the dam-breach hypothesis for the origin of Grand Canyon, dated as late Cenozoic within the geological column, in which two or three lakes southeast and northeast of Grand Canyon broke and carved Grand Canyon.[56,57] But even then, I recognized some nasty difficulties with the dam-breach hypothesis that I expected would be eventually explained by its advocates:

> I am not against the dam-breach theory and will await further evidence before making up my mind. However, the geological evidence does not seem favorable to the dam-breach theory.[58]

I began studying the Ice Age about 40 years ago[53,59,60,61,62] and took field trips to various locations, examining both the general geology and the Ice Age deposits. I discovered to my consternation that the general geology of various areas was not favorable to my initial leaning toward the K/T Boundary Model.

I began to look more widely at surface features of the rocks (the geological subfield of geomorphology) and discovered a myriad of features that can be ascribed to the runoff of the Floodwater, but which are difficult if not impossible to explain by uniformitarianism or post-Flood catastrophism.[63,64] I discovered that geomorphology strongly favors a Flood/post-Flood boundary mainly in the very late Cenozoic, especially in the western United States.

As a result, I have come to believe that the Flood/post-Flood boundary is in the late Cenozoic, especially the very late Cenozoic, the fourth option above. The timeframe within the geological column is rather broad because I do not ascribe to an exact geological column that represents creationist earth history; I take the geological column as a general order with many exceptions. In other words, I do not believe in the uniformitarian dating methods in neither an absolute nor a relative sense. Based on Walker's model (see Chapter 4) and geomorphology, I have discovered that the timing of

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[55] Holt, Ref. 10, p. 128.
[56] Austin, S.A., 1994. How was Grand Canyon eroded? In: Austin, S.A. (Ed.), *Grand Canyon—Monument to Catastrophism*, Institute for Creation Research, Dallas, TX, pp. 83–110.
[57] Brown, W., 2008. *In the Beginning: Compelling Evidence for Creation and the Flood*, 8th edition, Center for Scientific Creation, Phoenix, AZ.
[58] Oard, M.J., 1993. Comments on the breached dam theory for the formation of the Grand Canyon, *Creation Research Society Quarterly* 30:45.
[59] Oard, M.J., 1979. A rapid post-Flood Ice Age, *Creation Research Society Quarterly* 16(1):29–37, 58.
[60] Oard, M.J., 1986.An ice age within the biblical time frame; in: Walsh, R.E., Brooks, C.L., and Crowell, R.S. (Eds.), *Proceedings of the First International Conference on Creationism*, technical symposium sessions and additional topics, Creation Science Fellowship, Pittsburgh, PA, pp. 157–166.
[61] Oard, M.J., 1990. The evidence for only one ice age; in: Walsh, R.E. and Brooks, C.L. (Eds.), *Proceedings of the Second International Conference on Creationism*, technical symposium sessions and additional topics, Creation Science Fellowship, Pittsburgh, PA, pp. 191–200.
[62] Oard, M.J., 2004. *Frozen in Time: the Woolly Mammoth, the Ice Age, and the Biblical Key to Their Secrets*. Master Books, Green Forest, AR.
[63] Oard, M.J., 2008. *Flood by Design: Receding Water Shapes the Earth's Surface*, Master Books, Green Forest, AR.
[64] Oard, M.J. 2014. *Earth's Surface Shaped by Genesis Flood Runoff*, www.michael.oards.net/GenesisFloodRunoff.htm.

the Cenozoic is quite variable within the Flood and post-Flood periods.[65] Therefore, each location has to be examined on its own merits using defining criteria. At one location, the boundary may be in the Pliocene, but at another in the early or mid-Pleistocene and not related to Ice Age or other obvious post-Flood features. Roy Holt reached the same conclusion.[10]

I have proposed fourteen criteria to provide an aid for determining the Flood post-Flood boundary.[47] I plan to add more in this ebook. Since I have dealt with the issue of the Flood/post-Flood boundary numerous times,[45,47,65,66] I am in a unique position to address the main question of the extent of post-Flood catastrophism.

As a result of my long study, I have developed a strong bias towards the late Cenozoic. I once was open minded, even favoring the idea that the boundary might be at the K/T as mentioned above, but I no longer have an open mind and have taken the advice of G. K. Chesterton, who said: "Merely having an open mind is nothing. The object of opening the mind, as of opening the mouth, is to shut it again on something solid."[67] I have solid data to place the boundary in the Late Cenozoic.

The Evolutionary/Uniformitarian Geological Column and Timescale (in-depth)

Evolutionary/uniformitarian geologists have built up what they believe is a record of life originating with chemicals and evolving into single-celled organisms, which after several billion years evolved to multi-celled organisms. Then these multi-celled organisms evolved over about 600 million years ago to the present with man arriving on the scene around a few hundred thousand years ago. This record of life is called the geological column, and obviously has a very long timescale. Unfortunately, origin by chance and time are believed absolutely by the secular culture and it is a "litmus test" for gaining an advanced degree in so-called historical sciences and to become a tenured professor.[68] Is it any wonder why we only hear a one-sided argument in the public square? It is required that any observations of the rocks and fossils to be fit into the geological column, which incidentally was set up in the 1800s. The geological column has since become a dogma or absolute assumption of earth science, despite little geological knowledge at the time.

Figure 3.5 shows the standard geological column from the Archean to the present. The corresponding ages for the geological column are on the right. The top part of the column, the last 540 million years or about 1/9 of geological time, was constructed by the use of index fossils, organisms that are assumed to have lived for only a short time over large regions of the earth. After living a short time, the organisms became extinct, only to be replaced by other organisms.

The Historical Development of the Geological Column

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[65] Oard, M.J., 2001. Vertical tectonics and the drainage of Floodwater: a model for the middle and late diluvian period—Part II, *Creation Research Society Quarterly* 38 (2):79–95.
[66] Oard, M.J., 2001. Vertical tectonics and the drainage of Floodwater: a model for the middle and late diluvian period—Part I, *Creation Research Society Quarterly* 38 (1):3–17.
[67] Chesterton, G.K., *Autobiography*, Sheed and Ward, London, U.K., p. 212, 1936.
[68] Bergman, J., 2008. *Slaughter of the Dissidents: The Shocking Truth about Killing the Careers of Darwin Doubters*, Leafcutter Press, Southworth, WA.

In the early 1800s, some of the scientists believed that all the extinctions in the geological column represented catastrophes with the last catastrophe being the Genesis Flood, which only affected the surface sediments of the world called *drift*. Drift is now mostly considered glacial debris, but the term is still used as a synonym for glacial till, rocks of all sizes within a fine-grained matrix that accumulated from a glacier. So the Flood, as well as earlier catastrophes, was totally rejected by Enlightenment scientists by the mid-1800s. (Actually, the idea of uniformitarianism was believed by "geologists" in the late 1700s before it became a formal concept.[69]) It became accepted that all of the sedimentary rocks in the original geological column were the result of slow processes over millions of years or uniformitarianism, while the fossils were a record of evolution.

The fossils used to construct the original geological column were found mainly in the United Kingdom with a few coming from the Alps and the Ural Mountains in Russia[70]—a very limited area of the earth. It was assumed that this column could be applied worldwide, a very questionable assumption. From the geological column, uniformitarian scientists used particular "index fossils" to date a layer of sedimentary rock as far away as the Grand Canyon.

It is true that the geological column was developed in the early- to mid-1800s, before the concept of evolution became popular. So, some people think that the concept of evolution was not used to set up the geological column and therefore the geological column is an objective representation of fossil changes. However, the geological column was actually developed assuming "fossil succession," which is essentially evolution without using the term *evolution*. So, the concept was actually used to construct the original British geological column. That is why it was so easy to simply rename the so-called fossil succession as an evolutionary order once evolution was accepted after 1859 (the date of the publication of *The Origin of Species* by Charles Darwin). The geological column became an *assumed* time sequence of life long before radiometric dating techniques came into vogue in the mid twentieth century. The scientists built their geological column at a time when intellectuals were arbitrarily throwing out the Genesis Flood as the origin of the rocks and fossils.[70,71] Of course, the geological column can show general patterns relevant to biblical earth history, for instance a record of Flood burial from ecological zones.

How to Read the Geological Column

In Figure 3.5, the Precambrian includes the Proterozoic and Archean. The Hadean (not shown) has been recently invented for ages greater than about 4 billion years old. The Phanerozoic is the time younger than the Proterozoic and starts at about 540 million years ago. The Phanerozoic has been divided up into the Paleozoic (old life), Mesozoic (middle life), and Cenozoic (young life). The Cenozoic is divided up into two periods, the oldest is the Tertiary that covers practically all the Cenozoic from 65 million to about 2.6 million years ago. The Quaternary is the last 2.6 million years or so of secular earth

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[69] Rudwick, M.J.S., 2005. *Bursting the Limits of Time: The Reconstruction of Geohistory in the Age of Revolution*, The University of Chicago Press, Chicago, IL.

[70] Mortenson, T., 2006. The historical development of the old-earth geological timescale, In: Reed, J.K. and Oard, M.J. (editors), *The Geological Column: Perspectives within Diluvial Geology*, Creation Research Society Books, Chino Valley, AZ.

[71] Mortenson, T., 2004. *The Great Turning Point: "The Church's Catastrophic Mistake in Geology—Before Darwin."* Master Books, Green Forest, AR.

history that is generally regarded as the time of the Ice Age, although the Quaternary may have nothing to do with the Ice Age in many locations. The Quaternary period is further subdivided into two epochs: (1) the Pleistocene, which is the supposed time of the Ice Age from 2.5 million to 10,000 years ago, and (2) the Holocene which is the last 10,000 years of post-glacial time, considered an interglacial before the next ice age.

Since the Quaternary is considered the time frame for multiple, regular repeating ice ages, there has been much discussion on the time frame of the Quaternary. The boundary between the Quaternary and the older Tertiary was assumed to be about 1.8 to 2 million years ago. But scientists have been pushing back the beginning of the ice age period to older than 2 million years. The first Northern hemisphere ice age is now believed to have occurred at 2.6 million years ago, and so after a lengthy battle, the Quaternary/Tertiary boundary is now assumed to be 2.6 million years ago.[72]

[72] Kerr, R.A., 2008. A time war over the period we live in. *Science* 319:402-403.

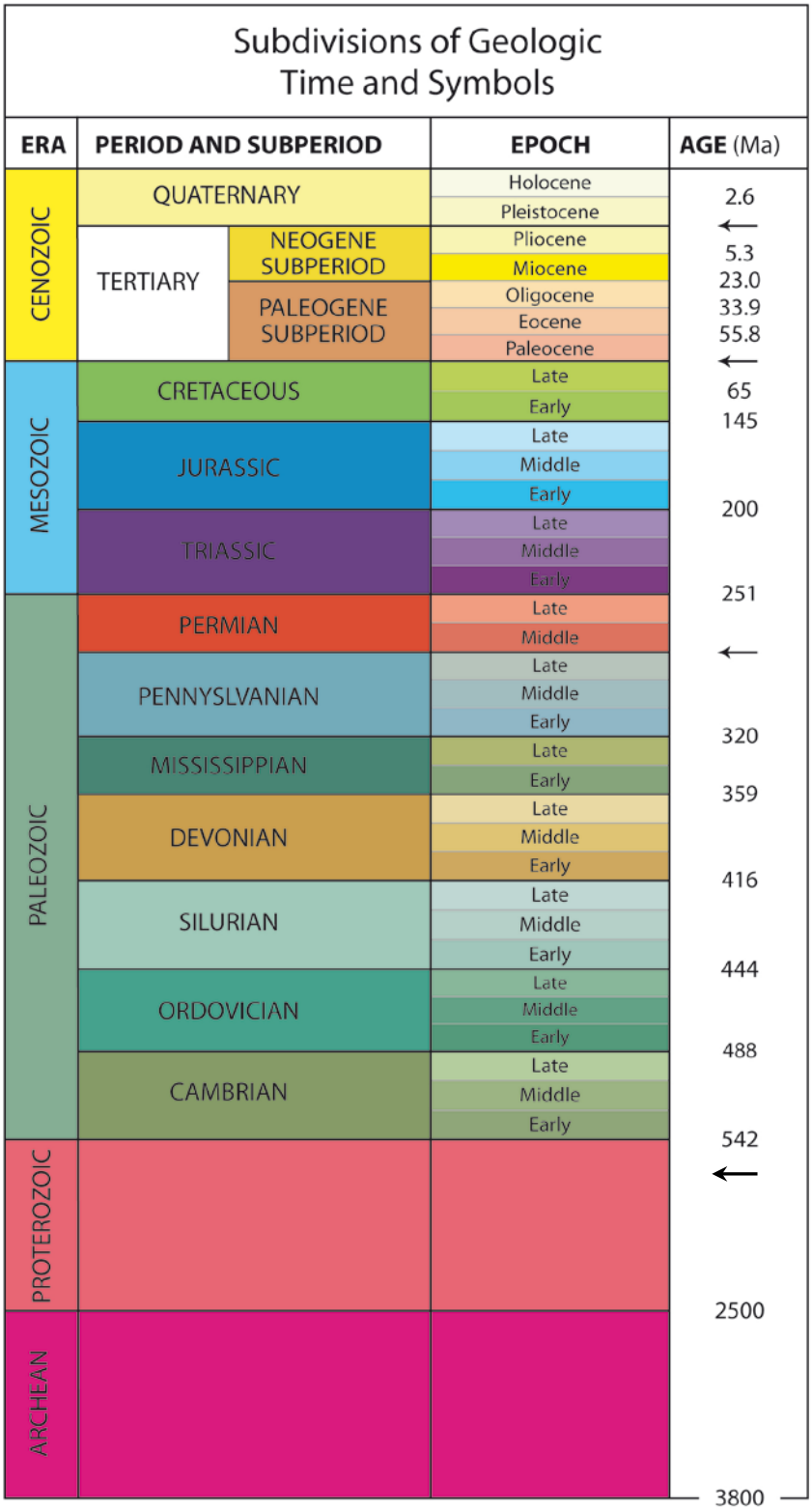

Figure 3.5. The geological column and timescale from the late Archean until the present showing the eras, periods, subperiods, and epochs of evolutionary/uniformitarian earth history. The ages in millions of years are shown on the right. The horizontal arrows on the right show the four main locations for the Flood/post-Flood boundary believed by creationists.